

REMARKS

Favorable reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims Status

Claims 1, 2 and 4 through 6 are now pending in the application. Claim 3 has been canceled herein. Claims 1, 2 and 4 have been amended to even more succinctly define the invention and/or to improve their form. Claims 5 and 6 are newly presented. It is respectfully submitted that no new matter has been added. Claim 1 is the only independent claim pending in the application.

Art Rejections

Claims 1, 3 and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakayama et al. (U.S. Patent No. 6,308,024) in view of '562 Ricoh (JP 2000-190562).

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakayama et al. in view of '562 Ricoh, and further in view of Sakai (JP-0822174).

The rationale underlying each of the foregoing rejections is set forth in the Official Action.

Response to Rejections

The rejections are respectfully traversed.

The Examiner recognizes that Nakayama et al. does not disclose a frame member, which includes an upper frame portion opposed to image forming portions, wherein the

upper frame portion has a plurality of recessed portions. Accordingly, the Examiner relies on Ricoh for allegedly teaching this claimed feature.

Amended Claim 6 calls for an image forming apparatus including a plurality of image forming portions and an emitting portion (an exposure unit) disposed beneath the plurality of image forming portions for exposing the respective image forming portions. More specifically, amended claim 1 calls for an image forming apparatus comprising a plurality of image forming portions, whereby each image forming portion includes a photosensitive member, a charging device for charging the photosensitive member, and a developing device for developing an electrostatic image on the photosensitive member with toner; and an emitting portion is disposed beneath the plurality of image forming portions for emitting light beams for exposing the plurality of photosensitive members. The emitting portion includes an upper frame portion opposed to the plurality of image forming portions; and a plurality of pass openings, which are provided in the upper frame portion, and through which the light beams for exposing the plurality of photosensitive members pass for exposing the plurality of photosensitive members. Each of the plurality of pass openings are disposed outside of areas, wherein each area is between a vertical tangential line, at a downstream side in a rotation direction of the photosensitive member, and a vertical tangential line, at an upstream side in the rotation direction of said photosensitive member, of each developing device in an associated image forming portion; and a recessed portion formed on the upper frame portion in a position different from the plurality of pass openings and disposed in a region between the areas and pass openings.

Heretofore, because of downsizing a main body of an image forming apparatus and an arrangement of image forming element portions, in an image forming apparatus an exposure unit is disposed beneath a plurality of image forming portions.

However, such image forming apparatuses have the problem that toner falls from a photosensitive member of each image forming portion onto an exposure unit. A plurality of pass openings through which light beams for exposing the photosensitive members pass through are provided in an upper portion of the exposure unit. The falling toner accumulates on a dust-proof glass plate provided on the pass opening, or if there is no such dust-proof glass plate, the falling toner passes through the pass opening to enter the inside of the exposure unit. More specifically, in such image forming apparatuses, the falling toner falls from an open portion, which is between a charging device and a developing device, and through which the photosensitive member of the image forming portion is exposed.

To this end, if a pass opening for exposure is provided just below that open portion, the toner directly falls into the pass opening. In addition, the falling toner accumulated on the exposure unit may move into the pass opening by air currents in the image forming apparatus or by shock to the image forming apparatus so that the toner accumulates on the pass opening and contaminates the pass opening.

Claim 1 recites the above-noted features of a plurality of pass openings, which are provided in the upper frame portion, and a recessed portion formed on the upper frame portion in a position different from the plurality of pass openings and disposed in a region between an area and a pass opening.

With this simple structure, the claimed invention avoids or reduces the toner falling from the open portion, which is between the charging device and the developing device, and through which the photosensitive member of the image forming portion is exposed, onto the pass opening provided in the upper frame portion or the toner falling on the upper frame portion and moving to the pass opening.

Applicant respectfully submits that Nakayama et al. and Ricoh do not disclose or suggest the claimed feature of "a plurality of pass openings, which are provided in said upper frame portion, and through which the light beams for exposing said plurality of photosensitive members pass, said plurality of pass openings being disposed outside of areas, wherein each area is between a vertical tangential line, at a downstream side in a rotation direction of said photosensitive member, of said charging device and a vertical tangential line, on an upstream side in the rotation direction of said photosensitive member, of each said developing device in an associated image forming portion" as recited in amended Claim 1.

Accordingly, Nakayama et al. and Ricoh, do not prevent or reduce the toner falling from the opening portion, which is between the charging device and the developing device, and through which the photosensitive member of the image forming portion is exposed, onto the pass opening provided in the upper frame portion or the toner falling on the upper frame portion and moving to the pass opening, with a simple structure.

Sakai et al. is merely cited for allegedly showing a salient feature of the invention recited in dependent Claim 2. It is respectfully submitted that Sakai et al. does not remedy the above-noted deficiencies of Nakayama et al. and Ricoh vis-à-vis amended Claim 1.

Finally, it is respectfully submitted that the combination rejection is not well founded and does not establish a *prima facie* case of obviousness. A combination rejection is proper only when there is some suggestion or motivation for one having ordinary skill in the art to combine the teachings of the cited art. The Examiner has provided a rationalization for combining the teachings of the cited art. However, there is nothing in the cited art which supports the position that it can be combined in the manner suggested. Even if the art could be so combined, the mere fact that the art can be combined is not sufficient if there is no suggestion in the art that such a combination is desirable. For example, see ACS Hospital Systems, Inc. v. Montefiore Hospital, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

In view of the foregoing, it is respectfully submitted that amended Claim 1 is allowable over Nakayama et al., Ricoh and Sakai et al. whether taken individually or in combination.

Newly-Presented Independent Claim 6

Independent claim 6 calls for an image forming apparatus comprising a plurality of image forming portions, each image forming portion including a photosensitive member, a charging device for charging said photosensitive member, and a developing device for developing an electrostatic image on the photosensitive member with toner; an emitting portion is disposed beneath the plurality of image forming portions for emitting light beams for exposing the plurality of photosensitive members, where the emitting portion include an upper frame portion opposed to the plurality of image forming portions. A plurality of pass openings pass for exposing said plurality of photosensitive members are

provided in the upper frame portion, and through which the light beams; a recessed portion provided between the plurality of pass openings so as to be opposed to an area is between a vertical tangential line, at a downstream side in a rotation direction of the photosensitive member, of said charging device and a vertical tangential line, at an upstream side in the rotation direction of the photosensitive member, of each developing device in an associated image forming portion.

It is respectfully submitted that the art of record does not disclose an image forming apparatus with the plurality pass openings and the recessed portion recited in Claim 6.

Dependent Claims

Claims 2, 4 and 5 depend directly from Claim 1, and are allowable by virtue of their dependency and in their own right for further defining Applicants' invention. Individual consideration of the dependent claims is respectfully requested.

Closing Comments

It is respectfully submitted that the pending claims are allowable over the art of record and that the application is in condition for allowance. Favorable reconsideration and early passage to issue of the present application are earnestly solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our New York office at the address shown below.

Respectfully submitted,

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